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1. THE PRESENT STELLAR DATA REDUCTION PROGRAM (SQUID) PROVIDES THE VARIANCE OF STELLAR IMAGE COORDINATE MEASUREMENTS AND THE COVARIANCE MATRIX OF THE RIGHT ASCENSION, DECLINATION, AND SWING OF THE STELLAR CAMERA. THE PROGRAM IS BEING MODIFIED SO THAT THE STANDARD DEVIATIONS ("ONE SIGMA REDUCTION ACCURACY") OF ROLL, PITCH, AND YAW CAN BE OUTPUT. THE ERROR PROPOGATION WILL REQUIRE THE INPUT OF THE COVARIANCE OF CAMERA POSITION (FOR THIS PURPOSE, WE WILL USE THE ALONG TRACK AND CROSS TRACK VARIANCES INDICATED IN APPENDIX A OF AN EARLIER COMMUNICATION). CONCURRENTLY, ALL STELLAR EXPOSURES FROM MISSION 4028 WILL BE GRADED ACCORDING TO IMAGE QUALITY, GEOMETRY, ETC. IT IS EXPECTED THAT THE MODIFIED SQUID PROGRAM WILL HAVE BEEN DEBUGGED, THAT THE DATA FROM MISSION 4028 WILL HAVE BEEN RUN THROUGH THE MODIFIED SQUID PROGRAM AND THAT THE STANDARD DEVIATIONS OF ROLL, PITCH, AND YAW WILL HAVE BEEN CORRELATED WITH THE IMAGE QUALITY, GEOMETRY, ETC. BY 15 AUGUST 1966. IF THE SAME DATA REDUCTIONS ARE REQUIRED FOR THE OTHER MISSIONS MENTIONED, ADDITIONAL TIME (DEPENDING ON WORK LOAD, AT LEAST ONE MORE MONTH) WILL BE REQUIRED.

29 JUL 1966

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2. THE STRIP TO INDEX RELATIVE ORIENTATION PROGRAM (SIRO) IS STILL IN THE DEBUGGING STAGE. ONE VERTICAL STRIP PHOTOGRAPH WITH SEVEN FRAMES OF CONCURRENT INDEX COVERAGE FROM MISSION 4028 HAVE BEEN AVAILABLE FOR MENSURATION. IT IS EXPECTED THAT THE SIRO PROGRAM WILL HAVE BEEN DEBUGGED, THAT THE MENSURATION OF CORRESPONDING IMAGERY ON AT LEAST THREE OF THE INDEX FRAMES AND ON THE STRIP PHOTOGRAPH WILL HAVE BEEN COMPLETED, AND THAT THE RELATIVE ORIENTATION OF THOSE THREE INDEX FRAMES TO THE STRIP PHOTOGRAPHY WILL HAVE BEEN DETERMINED BY 15 AUGUST 1966. IF RELATIVE ORIENTATIONS ARE REQUIRED FOR OTHER EXPOSURES AND/OR CRAB ANGLES FROM MISSION 4028 AND/OR IF RELATIVE ORIENTATIONS ARE REQUIRED FOR THE REMAINING MISSIONS MENTIONED, ADDITIONAL TIME WILL BE REQUIRED.

T O P S E C R E T

/END OF MESSAGE/

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